In the Claims,

Please AMEND claims 1 and 11.

Please CANCEL claims 9 and 13-17.

Please ADD new claims 37-40.

All pending claims are reproduced below. Marked up claims appear in the Appendix, attached at the back of this Preliminary Amendment.

1.   A method for enhancing the broadcast of a live event, comprising the steps of:

receiving video from a first camera;

sensing field of view data representing a field of view of said first camera;

determining a position and orientation of a video image of a target in said captured video at least partially based on recognizing one or more portions of said video image of said target in said captured video and at least partially based on said field of view data; and

modifying said captured video by enhancing at least a segment of said video image of said target.

2.   The method according to claim 1, wherein said step of determining a position includes the steps of:

determining a rough estimate of said position of said target in said captured video using said field of view data; and

determining a more precise estimate of said position of said target in said captured video using a pattern recognition technique.

3.   The method according to claim 1, further including the step of:

determining whether said target is within said field of view of said first camera.

4.   The method according to claim 1, wherein:

the step of determining is also at least partially based on comparing said field of view data to prestored location data for said target.

5.   The method according to claim 1, wherein:

said step of modifying replaces a first advertisement with a second advertisement.

6.   The method according to claim 1, wherein:

said step of modifying replaces an image of a surface in a stadium with an advertisement.

7.   The method according to claim 1, wherein:

said step of modifying includes highlighting a portion of a playing field.

8.   The method according to claim 1, wherein:

enhancing said video image of said target does not include replacing said video image of said target; and

said method further including the step of accounting for occlusions.

10.   The method according to claim 1, further including the steps of:

storing said target's location before said step of capturing; and

storing an unoccluded image of said target before said step of capturing.

11.   A method according to claim 1, further including the step of:

learning changes to said video image of target image.

12.   The method according to claim 1, further including the steps of:

comparing said video image of said target in said captured video with a video image stored in a memory; and

updating said memory to include a revised image of said target.

18.   A method for enhancing the broadcast of a target at a live event, comprising the steps of:

capturing a first frame of video using a first camera;

capturing a second frame of video using a second camera, said second frame of video including said target;

determining if said target is within said first frame of video;

determining a position and orientation of said target in said first frame of video;

detecting an occlusion of said target in said second frame of video;

determining where said detected occlusion is positioned in said first frame of video at least partially based on said step of detecting; and

modifying said first frame of video by enhancing said target in said first frame of video without enhancing said detected occlusion.

19.   A method according to claim 18, wherein:

said second camera is pointed at said target and is located substantially adjacent said first camera;

said step of detecting an occlusion includes comparing at least a portion of said second frame of video to an unoccluded image of said target.

20.   A method according to claim 19, wherein:

said second camera is zoomed such that said target fills a substantial portion of said second frame of video.

37.   A method for adding a graphic indication of a first down to a video of a football game during a broadcast of said football game, comprising the steps of:

storing an indication of a location on a football field, said location corresponding to said first down;

determining said location's position in said video; and

adding a line to said video at said location's position in said video, said step of adding includes adding said line to one or more portions of said video that are not occluded and not adding said line to one or more portions of said video that are occluded.

38.   One or more processor readable storage devices having processor readable code embodied on said processor readable storage devices, said processor readable code for programming one or more processors to perform a method comprising the steps of:

storing an indication of a location on a football field, said location corresponding to said

- 4 -

first down;

determining said location's position in said video; and

adding a line to said video at said location's position in said video, said step of adding includes adding said line to one or more portions of said video that are not occluded and not adding said line to one or more portions of said video that are occluded.

39. An apparatus for adding a graphic indication of a first down to a video of a football game during a broadcast of said football game, comprising:

a storage device; and

one or more processing units in communication with said storage device, said storage device stores data for said one or more processing units, said one or more processing units capable of performing a method comprising the steps of:

storing an indication of a location on a football field, said location corresponding to said first down,

determining said location's position in said video, and

adding a line to said video at said location's position in said video, said step of adding includes adding said line to one or more portions of said video that are not occluded and not adding said line to one or more portions of said video that are occluded.

40. An apparatus for adding a graphic indication of a first down to a video of a football game during a broadcast of said football game, comprising:

a storage device; and

one or more processing units in communication with said storage device, said storage device stores data for said one or more processing units, said one or more processing units capable of performing a method comprising the steps of:

receiving video from a camera,

receiving field of view data for said camera based on one or more field of view sensors that do not use pattern recognition,

determining a position and orientation of a video image of a target area in said video, said step of determining a position is at least partially based on recognizing one or more portions of said video, and step of determining a position is also at least partially

based on said field of view data, and

      causing an enhancement at least a portion of said video image of said target area based on said step of determining a position and orientation.

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The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 501826 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

Date: _September 24, 2001_   By: _____

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